## Amendments to the Claims:

1-5 (cancelled)

6 (currently amended): <u>An interleaver comprising: a birefringent element assembly providing two output components which are generally orthogonal to each other; and a reflector configured to direct the two components from the birefringent element assembly back through the birefringent element assembly;</u> ~~The interleaver as recited in claim 1,~~ wherein the phase delays and the angular orientations of birefringent elements of the birefringent element assembly are selected from the table:

Table III

| First Stage Phase Delays | First Stage Orientations | Second Stage Phase Delays | Second Stage Orientations |
|---|---|---|---|
| $\Gamma + 2m_1\,\pi$, $2\Gamma + 2m_2\,\pi$, $2\Gamma + 2m_3\,\pi$ | $\varphi_1$, $\varphi_2$, $\varphi_3$ | $2\Gamma' + 2k_3\,\pi$, $2\Gamma' + 2k_2\,\pi$, $\Gamma' + 2k_1\,\pi$ | $90°\pm\varphi_3$, $90°\pm\varphi_2$, $90°\pm\varphi_1$ (parallel component) <br> $\pm\varphi_3$, $\pm\varphi_2$, $\pm\varphi_1$ (orthogonal component) <br> where $\Gamma - \Gamma' = 2l\pi$ |
| $\Gamma + 2m_1\,\pi$, $2\Gamma + 2m_2\,\pi$, $2\Gamma + 2m_3\,\pi$ | $\varphi_1$, $\varphi_2$, $\varphi_3$ | $2\Gamma' + 2k_3\,\pi$, $2\Gamma' + 2k_2\,\pi$, $\Gamma' + 2k_1\,\pi$ | $90°\pm\varphi_3$, $90°\pm\varphi_2$, $90°\pm\varphi_1$ (parallel component) <br> $\pm\varphi_3$, $\pm\varphi_2$, $\pm\varphi_1$ (orthogonal component) <br> where $\Gamma - \Gamma' = (2l + 1)\,\pi$ |
| $2\Gamma + 2m_3\,\pi$, $2\Gamma + 2m_2\,\pi$, $\Gamma + 2m_1\,\pi$ | $\varphi_3$, $\varphi_2$, $\varphi_1$ | $\Gamma' + 2k_1\,\pi$, $2\Gamma' + 2k_2\,\pi$, $2\Gamma' + 2k_3\,\pi$ | $90°\pm\varphi_1$, $90°\pm\varphi_2$, $90°\pm\varphi_3$ (parallel component) <br> $\pm\varphi_1$, $\pm\varphi_2$, $\pm\varphi_3$ (orthogonal component) <br> where $\Gamma - \Gamma' = 2l\pi$ |
| $2\Gamma + 2m_3\,\pi$, $2\Gamma + 2m_2\,\pi$, $\Gamma + 2m_1\,\pi$ | $\varphi_3$, $\varphi_2$, $\varphi_1$ | $\Gamma' + 2k_1\,\pi$, $2\Gamma' + 2k_2\,\pi$, $2\Gamma' + 2k_3\,\pi$ | $\pm\varphi_1$, $\pm\varphi_2$, $\pm\varphi_3$ (parallel component) <br> $90°\pm\varphi_1$, $90°\pm\varphi_2$, $90°\pm\varphi_3$ (orthogonal component) <br> where $\Gamma - \Gamma' = (2l + 1)\,\pi$ |

Wherein m1, m2, m3, k1, k2, k3 and l are integers $(0, \pm 1, \pm 2, \ldots)$.

7-11 (cancelled)

12 (currently amended): The interleaver as recited in ~~claim 1~~ <u>claim 6</u>, wherein the birefringent element assembly comprises a first birefringent element having an angular orientation of $\varphi_1$, a second birefringent element having an angular orientation of $\varphi_2$ and a third birefringent element having an angular orientation of $\varphi_3$;

wherein an order of the first birefringent element, second birefringent element, and third birefringent element is selected from the group consisting of:

first birefringent element, second birefringent element, third birefringent element;

third birefringent element, second birefringent element, first birefringent element; and

wherein the angular orientations are with respect to a polarization direction of light entering the birefringent element assembly.

13 (currently amended): The interleaver as recited in ~~claim 1~~ claim 6, wherein the birefringent element assembly comprises:

a first birefringent element having an angular orientation of 45° with respect to a polarization direction of light input to the birefringent element assembly and has a phase delay of $\Gamma$;

a second birefringent element has an angular orientation of -21° with respect to a polarization direction of light input to the birefringent element assembly and has a phase delay of $2\Gamma$; and

a third birefringent element has an angular orientation of 7° with respect to a polarization direction of light input to the birefringent element assembly and has a phase delay of $2\Gamma$.

14 (currently amended): An interleaver comprising: a birefringent element assembly providing two output components which are generally orthogonal to each other; and a reflector configured to direct the two components from the birefringent element assembly back through the birefringent element assembly;

~~The interleaver as recited in claim 1,~~ wherein the birefringent element assembly comprises two birefringent elements; and

the angular orientations ($\varphi_1$ and $\varphi_2$) and the corresponding phase delays of the two birefringent elements are selected from the table:

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Table III

| First Stage Phase Delays | First Stage Orientations | Second Stage Phase Delays | Second Stage Orientations |
|---|---|---|---|
| $\Gamma + 2m_1 \pi$, $2\Gamma + 2m_2 \pi$, $2\Gamma + 2m_3 \pi$ | $\varphi_1, \varphi_2, \varphi_3$ | $2\Gamma' + 2k_3 \pi$, $2\Gamma' + 2k_2 \pi$, $\Gamma' + 2k_1 \pi$ | $90°\pm\varphi_3$, $90°\pm\varphi_2$, $90°\pm\varphi_1$ (parallel component) <br> $\pm\varphi_3, \pm\varphi_2, \pm\varphi_1$ (orthogonal component) <br> where $\Gamma - \Gamma' = 2l\pi$ |
| $\Gamma + 2m_1 \pi$, $2\Gamma + 2m_2 \pi$, $2\Gamma + 2m_3 \pi$ | $\varphi_1, \varphi_2, \varphi_3$ | $2\Gamma' + 2k_3 \pi$, $2\Gamma' + 2k_2 \pi$, $\Gamma' + 2k_1 \pi$ | $90°\pm\varphi_3$, $90°\pm\varphi_2$, $90°\pm\varphi_1$ (parallel component) <br> $\pm\varphi_3, \pm\varphi_2, \pm\varphi_1$ (orthogonal component) <br> where $\Gamma - \Gamma' = (2l + 1) \pi$ |
| $2\Gamma + 2m_3 \pi$, $2\Gamma + 2m_2 \pi$, $\Gamma + 2m_1 \pi$ | $\varphi_3, \varphi_2, \varphi_1$ | $\Gamma' + 2k_1 \pi$, $2\Gamma' + 2k_2 \pi$, $2\Gamma' + 2k_3 \pi$ | $90°\pm\varphi_1$, $90°\pm\varphi_2$, $90°\pm\varphi_3$ (parallel component) <br> $\pm\varphi_1, \pm\varphi_2, \pm\varphi_3$ (orthogonal component) <br> where $\Gamma - \Gamma' = 2l\pi$ |
| $2\Gamma + 2m_3 \pi$, $2\Gamma + 2m_2 \pi$, $\Gamma + 2m_1 \pi$ | $\varphi_3, \varphi_2, \varphi_1$ | $\Gamma' + 2k_1 \pi$, $2\Gamma' + 2k_2 \pi$, $2\Gamma' + 2k_3 \pi$ | $\pm\varphi_1, \pm\varphi_2, \pm\varphi_3$ (parallel component) <br> $90°\pm\varphi_1$, $90°\pm\varphi_2$, $90°\pm\varphi_3$ (orthogonal component) <br> where $\Gamma - \Gamma' = (2l + 1) \pi$ |

Wherein m1, m2, m3, k1, k2, k3 and l are integers (0, ±1, ±2, . . .).

15 (currently amended): The interleaver as recited in ~~claim 1~~ claim 14, wherein the birefringent element assembly comprises:

a first birefringent element having an angular orientation of 45° with respect to a polarization direction of light input to the birefringent element assembly and has a phase delay of $\Gamma$; and

~~the~~ a second birefringent element has an angular orientation of -21° with respect to a polarization direction of light input to the birefringent element assembly and has a phase delay of $2\Gamma$;

16-18 (cancelled)

## Correction to Typos in Table III for Claim 6:

In the patent publication US 2003/0025998 A1 (Feb. 6, 2003), there are four typos for Table III under claim 6 and paragraph [0143]:

"$100_1$" (happened at two places) should be "$\varphi_1$" and "$100_3$"( happened at two places) should be "$\varphi_3$", respectively.

Table III in the specification paragraph [0129] is correct.  Please help to make correction if this application is allowed to issue.